

WinFS Schema

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Microsoft **Training & Education**

About this presentation

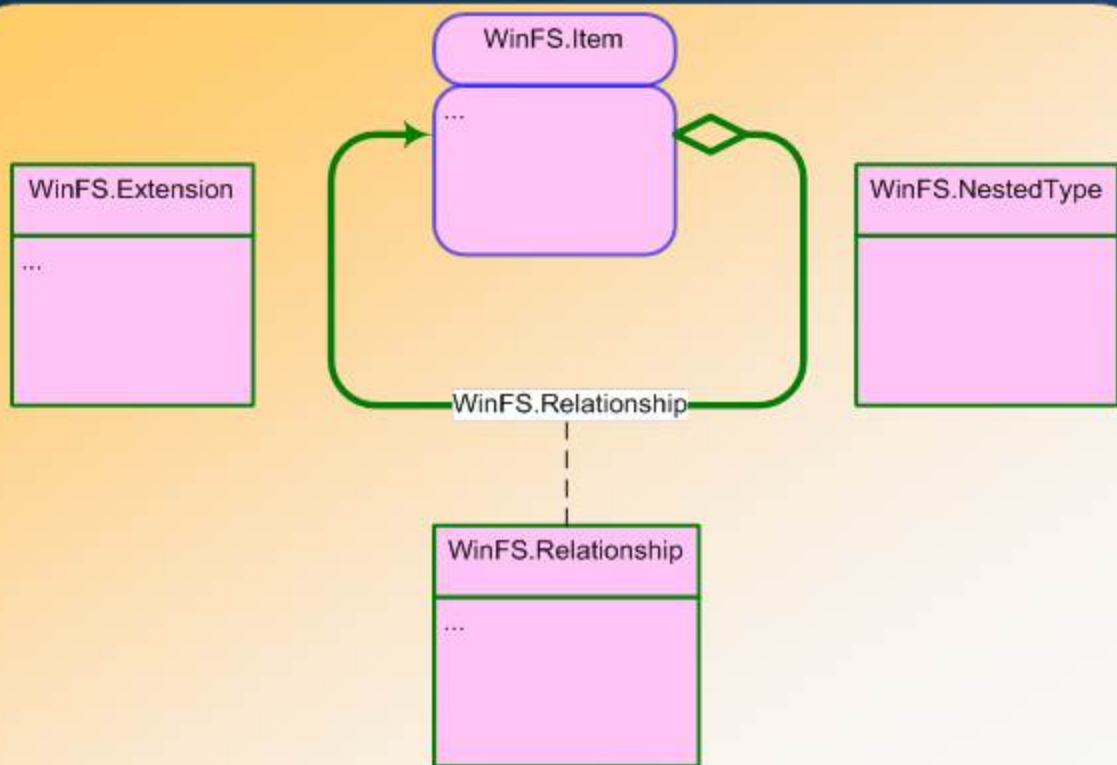
- Agenda
 - Review WinFS Data Model
 - Look at some schemas
 - Base, Contact, Location, Calendar, Task, Document, Media, miscellaneous junk
 - Talk about schema design

Objectives

After attending this presentation, you will :

- Understand the WinFS types
- Know which core types WinFS will have in V1
- Understand in detail Contacts, Calendar, Tasks and Documents
- Be able to outline the schema design process

Data Model: Basic Types



Item

Target
Role

Target
Type

Relationship
Properties

Relationship

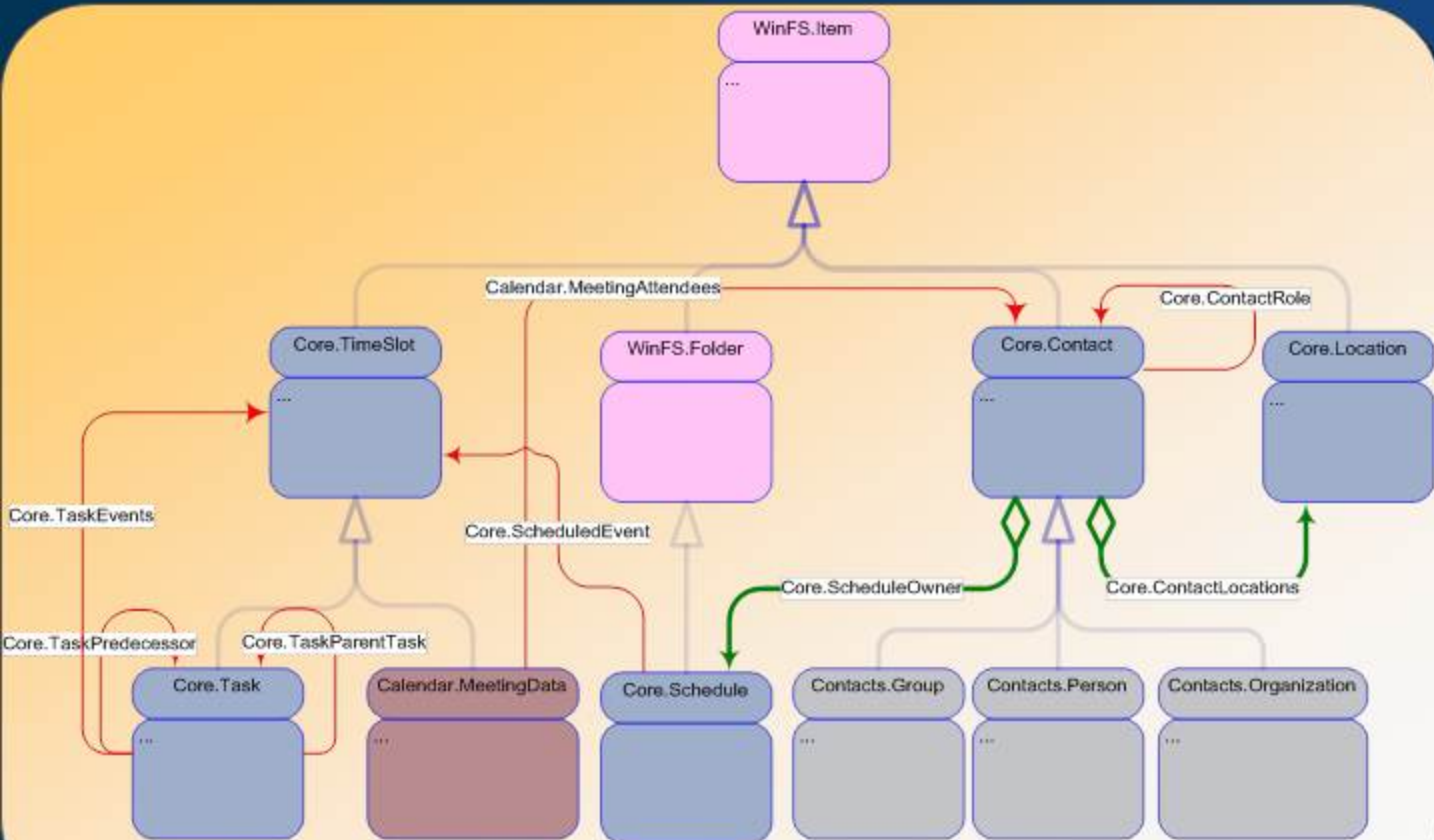
Source
Role

Source
Type

WinFS.Item

CreationTime:DateTime Optional
DisplayName:String(256) Optional
IsFileBacked:Boolean Optional
ItemId:Guid Required
LastModificationTime:DateTime Optional
SavedFrom:Item
 ◄► AttachmentSavedFrom.ClientAttachment
SourceItem:Item
 ◄► AttachmentSource.ClientAttachment
Target:Item
 ◄► Relationship.Source
 IsHidden:Boolean Required
 Mode:Int32 Required
 Name:String(255) Optional
 RelationshipId:Guid Required
 SourceItemId:Guid Required
 TargetItemId:Guid Optional
Target:Item
 ◄► SerializedRelationship.Source
 Content:Binary(max) Required
 MissingType:String(512) Optional
 Type:String(512) Required
Attachment:Item
 ◄► Attachments.Parent
ComponentItem:Item
 ◄► Component.Parent

Overview

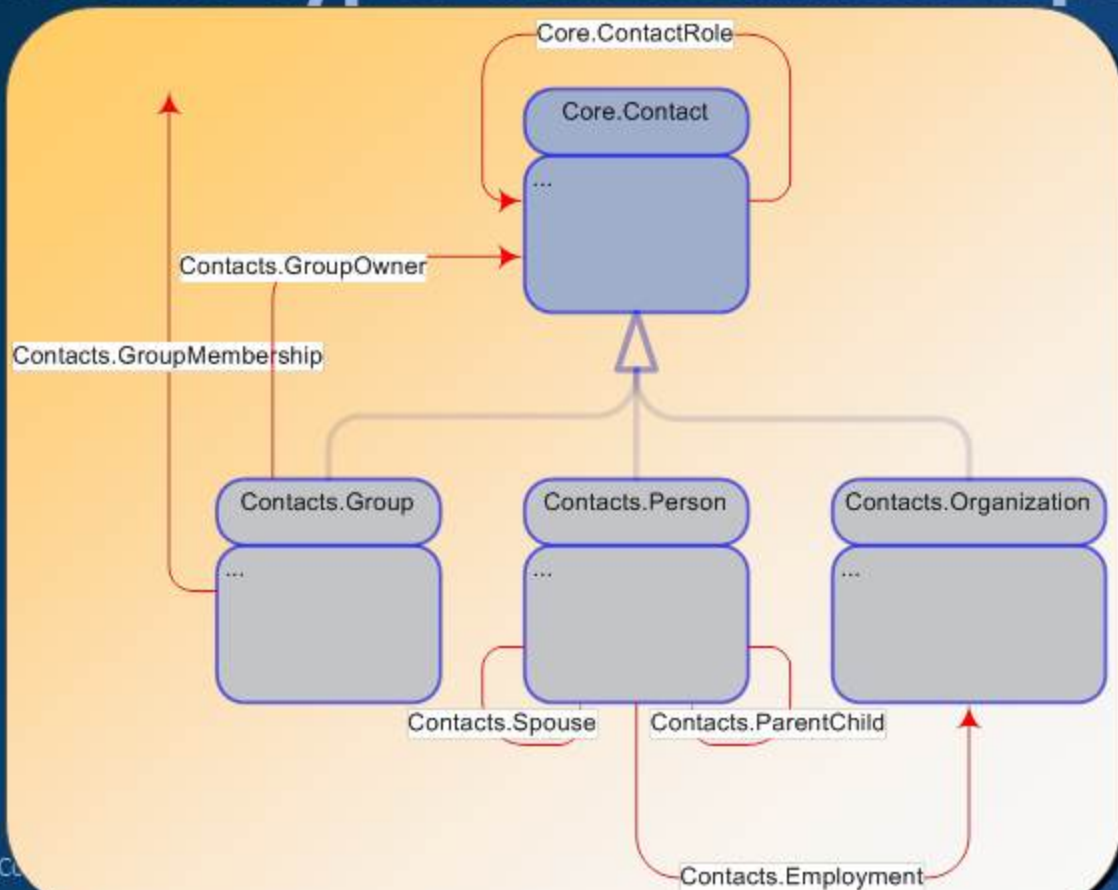


Contacts

- Basic Scenarios
 - Something I can send a message to
 - People, Organizations, Groups
 - Many interesting Contact-Contact relationships
 - Spouse, Child, Employer



Contacts: Types and Relationships



Core.Contact Details

Core.Contact

EAddresses:ContactEAddress MultiSet

Description:String(1024) Optional

EndDate:DateTime Optional

Label:ContactEAddressLabel Optional

OutOfBox:Int32 Optional

UserEntered:String(32) Optional

StartDate:DateTime Optional

Notes:RichText MultiSet

Plain:String(max) Optional

UserTile:Binary(max) Optional

ContactTarget:Contact

◀▶ ContactRole.ContactSource

EAddresses:ContactEAddress MultiSet

Description:String(1024) Optional

EndDate:DateTime Optional

Label:ContactEAddressLabel Optional

OutOfBox:Int32 Optional

UserEntered:String(32) Optional

StartDate:DateTime Optional

EndDate:DateTime Optional

StartDate:DateTime Optional

Contact.Person Properties

Contacts.Person

Accreditations:Accreditation MultiSet
Value:String(25) Required
BirthDate:DateTime Optional
ExpirationDate:DateTime Optional
Gender:Keyword Optional
Value:String(256) Required
PersonalNames:FullName MultiSet
...
Profession:Keyword MultiSet
Value:String(256) Required

Contacts.FullName

DisplayAs:String(255) Optional
GivenName:String(64) Optional
Keywords:Keyword MultiSet
Value:String(256) Required
MiddleName:String(64) Optional
Nickname:String(64) Optional
PronunciationGivenName:String(128) Optional
PronunciationSurname:String(128) Optional
Suffix:String(64) Optional
Surname:String(64) Optional
Title:String(64) Optional

Contact.Person Relationships

- ◀FaxAccountContact
- ◀ServiceProvider
- ◀AttachmentParticipants
- ◀MessageParticipants
- ◀AppointmentAttendee
- ◀Annotator
- ◀Assignment
- ◀Execution
- ◀Ownership
- ◀GroupContact
- ◀GroupOwner
- ▶Presence
- ◀Listeners
- ◀RadioStationContentDistributor
- ◀ContactsInPicture
- ◀ContentDistributor
- ◀ADSSynchronizationPublisher
- ◀CommodityOwner
- ▶ContactLocations
- ◀▶ContactRole
- ◀DocumentAuthor
- ◀DocumentRelevantContacts
- ◀Publisher
- ◀▶EmployeeAssistant
- ◀▶EmployeeManager
- ▶Employment
- ◀HouseholdMember
- ◀▶ParentChild
- ▶PersonPersonalPicture
- ◀▶Spouse

Contacts.Organization Details

Contacts.Organization

OrganizationPronunciationName:String(1024) Optional

Employee:Person

◀Employment.Employer

EmployeeID:String(60) Optional

EmployeeStatus:Keyword Optional

Value:String(256) Required

EmployeeTitle:Keyword Optional

Value:String(256) Required

EndDate:DateTime Optional

StartDate:DateTime Optional

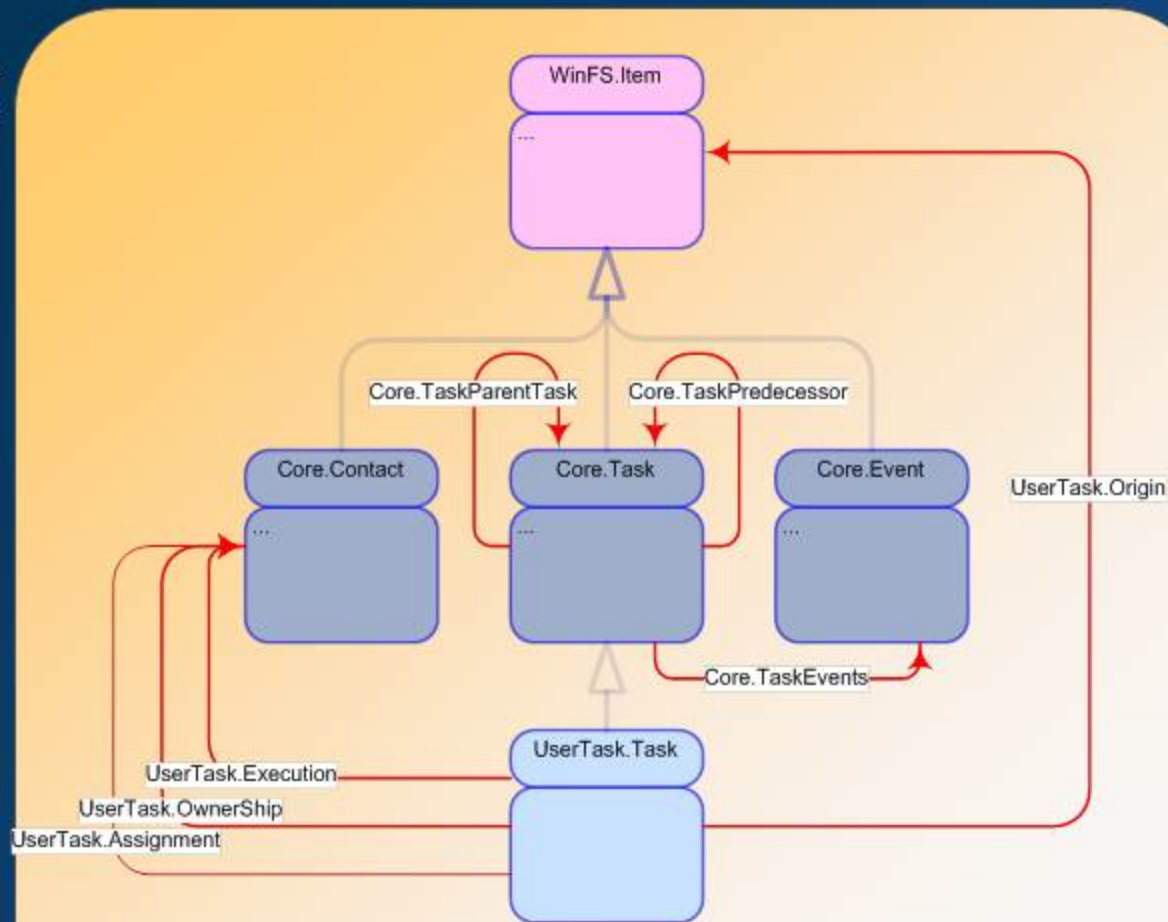
ParentOrganizationTarget:Organization

◀▶ParentOrganization.OrganizationSource

Task Schema

- Basic Scenarios
 - Outlook task
 - Someone managing their time
 - Win OE task
 - Group of people cooperating to get something done
 - CRM task
 - Visit to the doctor
 - System task

Task



Core.Task Details

Core.Task

Constraint:Xml Optional
Description:String(max) Optional
DueBy:DateTime Optional
Ended:DateTime Optional
ExpectedDuration:Int64 Optional
Method:String(200) Optional
Outcome:Keyword Optional
 Value:String(256) Required
PercentAllocation:Int16 Optional
PercentComplete:Int16 Optional
Priority:Int32 Optional
ScheduledStart:DateTime Optional
Started:DateTime Optional
Status:String(64) Optional
TimeTaken:Int64 Optional
Events:Event
 ▶ TaskEvents.Flow
ParentTask:Task
 ◀▶ TaskParentTask.Task
 Constraints:FlowConstraint MultiSet
 Value:String(1024) Optional
Predecessor:Task
 ◀▶ TaskPredecessor.Task
 Constraints:FlowConstraint MultiSet
 Value:String(1024) Optional

UserTask.Task Details

UserTask.Task

Assignee:Contact

▶ Assignment.AssignedTask

Executor:Contact

▶ Execution.ExecutedTask

Originator:Item

▶ Origin.OriginatedTask

Owner:Contact

▶ OwnerShip.OwnedTask

Category:CategoryDictionaryEntry

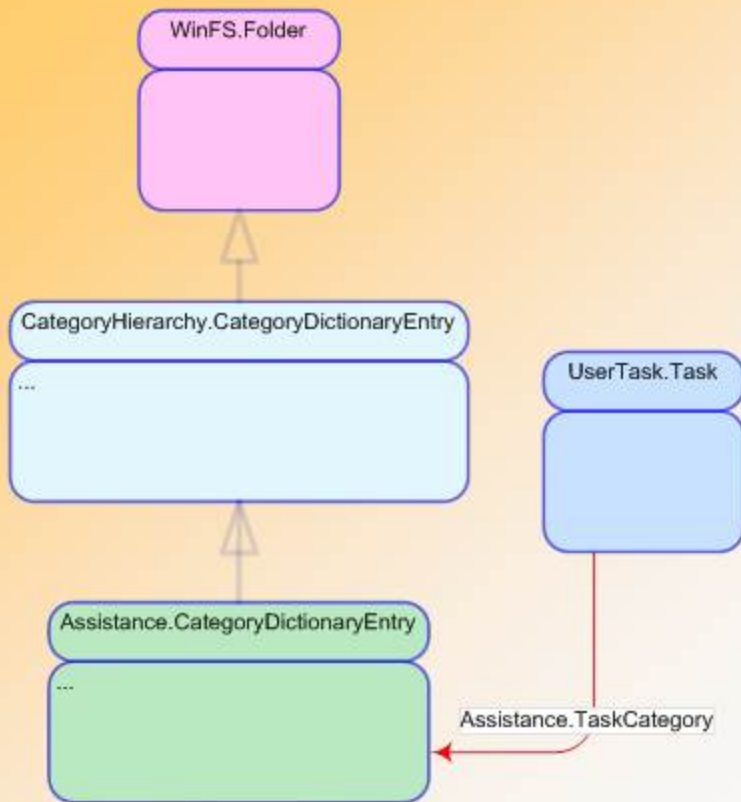
▶ TaskCategory.Task

CategoryType:String(32) Optional

DisplayName:String(256) Optional

Order:Int32 Optional

Using Tasks



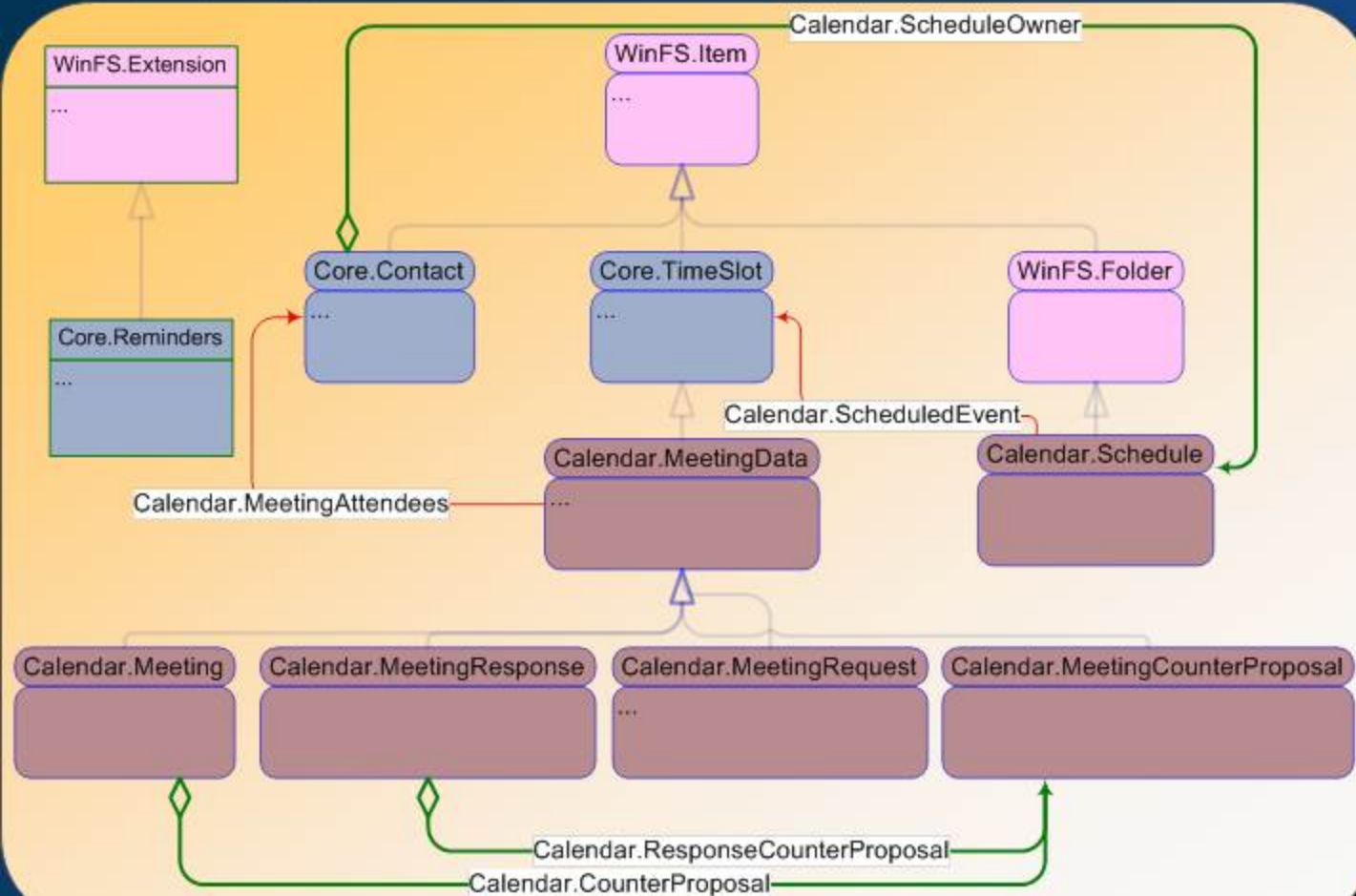
Related Topics

- Task Requests
- People, Principals and Accounts
- Tasks and Resources

Calendar Schema

- Basic Scenarios
 - Meetings and tasks
 - Inbox/outbox/Draft
 - Schedules
 - Accept and decline
 - Recurrences

Calendar



Core.TimeSlot

Core.TimeSlot

Description:String(1024) Optional

EndTime:DateTime Required

IsReminderSet:Boolean Optional

Preview:String(256) Optional

StartTime:DateTime Required

Recurrence:RecurrenceData Optional

ExceptionItem:TimeSlot

◀▶ Exception.TimeSlot

ExceptionData:ExceptionData Required

DeletedAttachments:Binary(512) Optional

DeletedAttendees:Binary(1024) Optional

DeletedBody:Boolean Optional

DeletedReminder:Boolean Optional

ModifiedPropertyNames:Binary(512) Optional

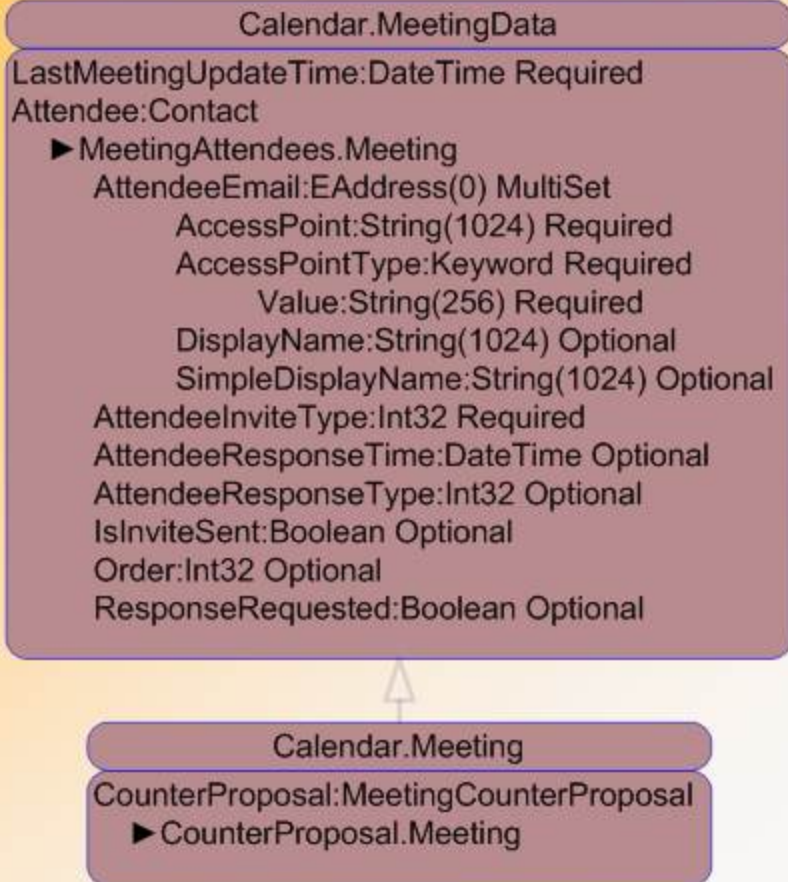
OriginalInstanceStartTime:DateTime Required

TimeSlot Recurrences

Core.RecurrenceData

AdvanceHijriValue: Int32 Optional	TimeZone: TimeZone Required
AfterDay: Int32 Optional	AdditionalDaylightBias: Int32 Optional
CalendarType: Keyword Required	DaylightTransition: TimeZoneTransition Optional
Value: String(256) Required	TransitionAfterDay: Int32 Optional
DayOfMonth: Int32 Optional	TransitionDay: Int32 Optional
DeleteExceptionDates: Binary(1024) Optional	TransitionMonth: Int32 Optional
FirstDayOfWeek: Int32 Required	TransitionTime: DateTime Optional
ForceExact: Boolean Optional	TransitionWeek: Int32 Optional
Fr: Boolean Optional	TransitionWeekDayOfMonth: Int32 Optional
Interval: Int32 Required	StandardBias: Int32 Required
IsLeapYear: Boolean Optional	StandardTransition: TimeZoneTransition Optional
IsRegenerated: Boolean Optional	TransitionAfterDay: Int32 Optional
LeapMonthValue: Int32 Optional	TransitionDay: Int32 Optional
Mo: Boolean Optional	TransitionMonth: Int32 Optional
MonthOfYear: Int32 Optional	TransitionTime: DateTime Optional
RepeatForever: Boolean Optional	TransitionWeek: Int32 Optional
RepeatInstances: Int32 Optional	TransitionWeekDayOfMonth: Int32 Optional
RepeatType: Int16 Required	TimeZoneName: String(32) Optional
Sa: Boolean Optional	Tu: Boolean Optional
Su: Boolean Optional	We: Boolean Optional
Th: Boolean Optional	WeekOfMonth: Int32 Optional
	WindowEnd: DateTime Optional
	WindowStart: DateTime Required

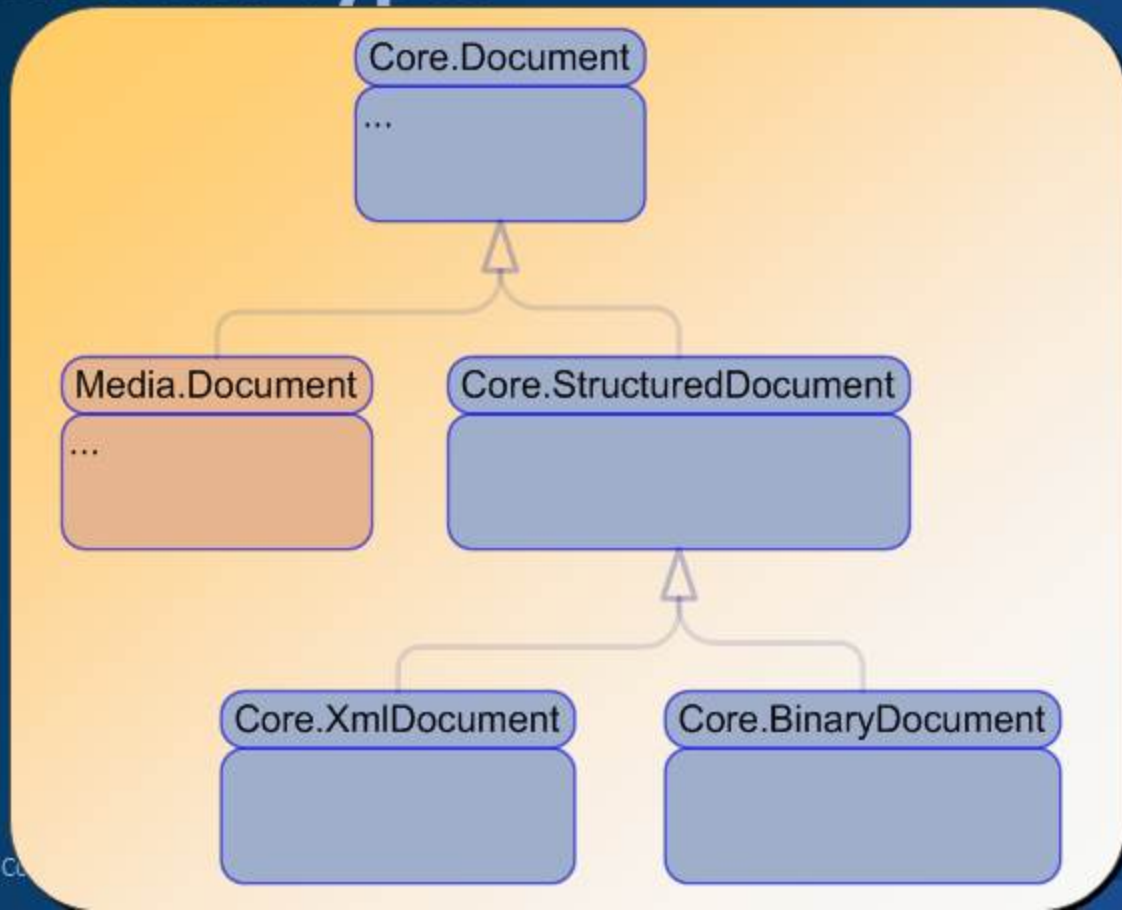
Calendar.Meeting Relationships



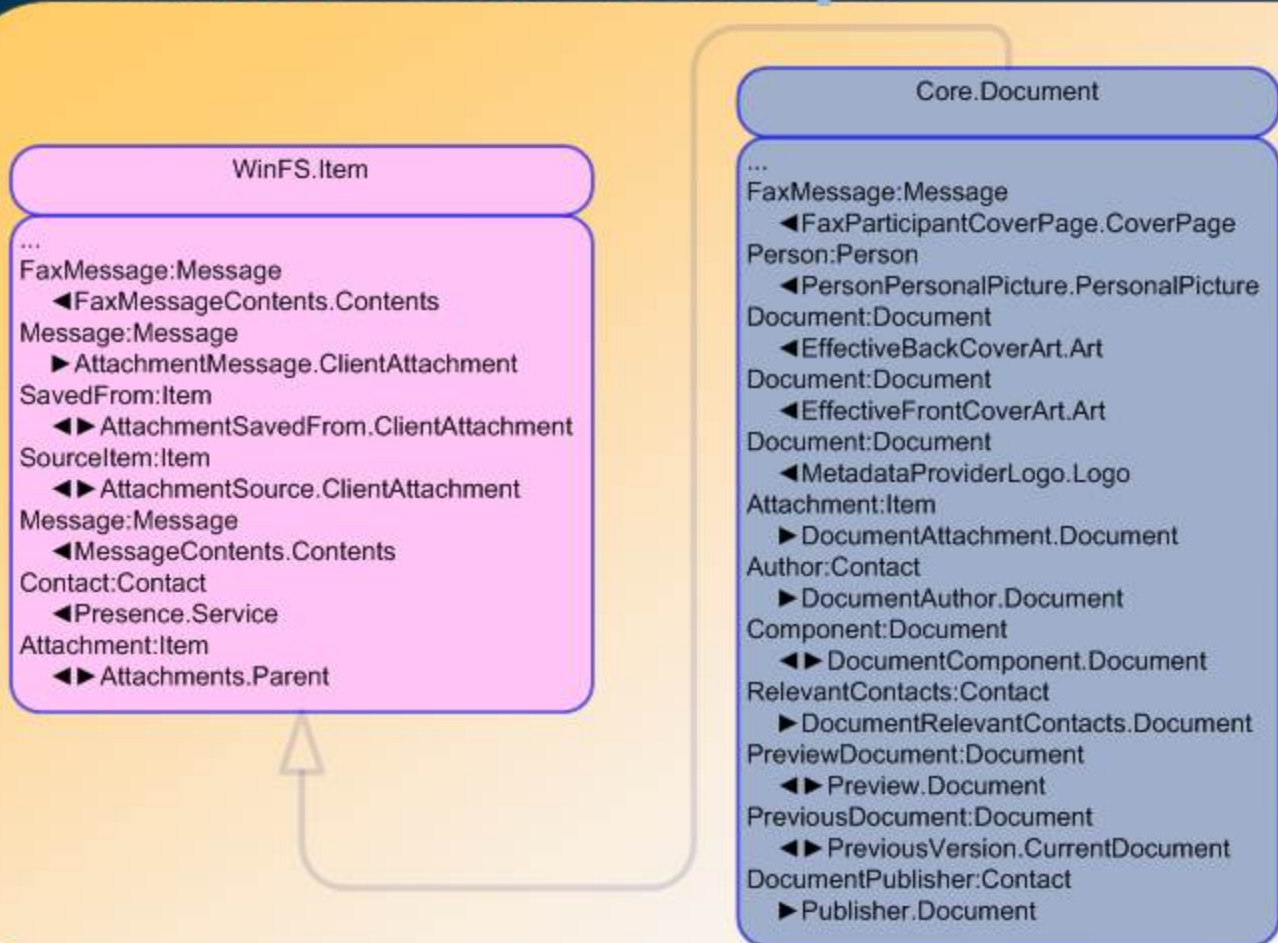
Document Scenarios

- Document can be opened and edited by a suitably capable application
- Documents have authors
- People and organizations can be associated with documents in various ways
 - Reviewers, Approvers, Owners etc
- Documents have titles
- Documents contain text and can be printed

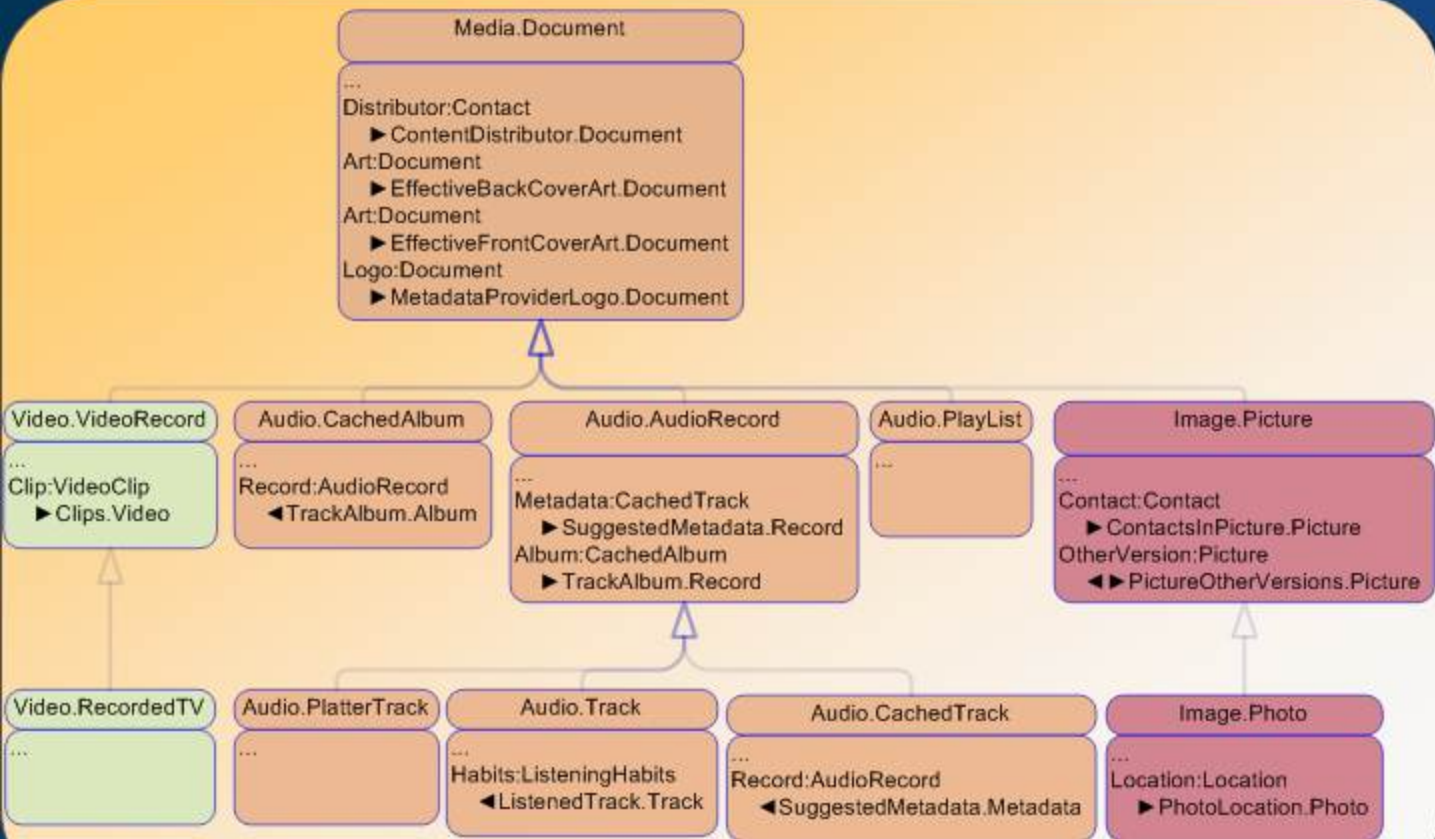
Document Types



Document Relationships



Media Schemas



Media.Document Properties

Media.Document

ContentGroupDescription:String(64) Optional

Duration:Int64 Optional

Genre:MVString256 MultiSet

 Data:String(256) Required

History:History MultiSet

 Date:DateTime Optional

 Name:String(128) Optional

 Provider:String(128) Optional

 Type:String(64) Required

 Value:String(128) Optional

ISRC:String(64) Optional

MediaCatalogNumber:String(64) Optional

MediaClassPrimaryID:Guid Optional

MediaClassSecondaryID:Guid Optional

MetadataProviderCopyright:String(256) Optional

MetadataProviderName:String(128) Optional

Mood:MVString256 MultiSet

 Data:String(256) Required

NoAutoInfoProcessing:Boolean Optional

OriginalPhysicalID:String(1024) Optional

Period:String(128) Optional

Protected:Boolean Optional

ProtectedType:String(128) Optional

Rating:Rating MultiSet

 RatingProvider:String(64) Required

 Type:String(64) Required

RecordingDate:DateTime Optional

ReleaseDate:DateTime Optional

RelevantUrl:UrlReference MultiSet

 UrlString:String(max) Optional

 UrlType:MVString128 MultiSet

 Data:String(128) Required

StyleByMetadataProvider:MVString256 MultiSet

 Data:String(256) Required

Designing Schemas: Details

1. Understand what properties you want to add to WinFS
 - 1.1. Pick Names and types for the properties
 - 1.2. Decide which properties go together
2. Compare your properties to the existing schemas
 - 2.1. Look for any types that have all your properties
 - 2.2. Look for any types that have some of your properties
 - 2.3. Consider Introducing a new Item type

Designing Schemas: Details

3. "Normalize" your properties

3.1. Look for Nested Types

3.2. Look for Embedded Items

3.3. Look for Relationships

3.4. Factor the type

4. Namespaces and scopes

4.1. Does your population overlap with anyone else's?

4.1.1. Complete Overlap

4.1.2. Partial Overlap

4.1.3. No Overlap

4.2. Identifying properties

Summary

- Lots of schemas
 - PIM
 - Document
 - Media
- Extensible
 - Everybody gets it

Call to action

- Understand and query
- Write Apps
- Extend schemas

Resources

- <http://winfs>

Questions



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